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10/658,370	09/10/2003	Takashi Yamazaki	008312-0305862	3316

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EXAMINER
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HUSON, MONICA ANNE

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 02/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/658,370

**Applicant(s)**

YAMAZAKI ET AL.

**Examiner**

Monica A. Huson

**Art Unit**

1732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

This office action is in response to the paper filed 21 November 2005.

### ***Claim Objections***

Claim 6 is objected to because of the following informalities: It is believed that “bump” (line 5) should actually be --pump--. Further, it is believed that the word --versus-- has been inadvertently omitted between the words [pump] (see above) and time. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kamiguchi et al. (U.S. Patent 6,527,534). Regarding Claim 1, Kamiguchi et al., hereafter “Kamiguchi,” show that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin

Art Unit: 1732

driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and raising an alarm (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9).

Regarding Claim 2, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions in a single ejection step reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the “predetermined number” of malfunctions is interpreted as being able to include one (1) malfunction.).

Regarding Claim 3, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the “predetermined number” of malfunctions is interpreted as being able to include one (1) malfunction. It is further noted that the “predetermined time” is interpreted as being able to include the time for a single ejection step.).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kamiguchi, in view of Ohno et al. (U.S. Patent 5,492,658).

Regarding Claim 4, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and raising an alarm (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9). Kamiguchi shows using an electric machine, and he does not show using a hydraulic-equipped machine. Ohno et al., hereafter "Ohno," show that it is known to carry out an injection molding control sequence, wherein the functionally-similar control parameters can be applied to both electric and hydraulic machines (Column 2, lines 22-27, 33-34; Column 3, lines 38-48; It is interpreted that hydraulic pressure of an ejector pin would be functionally equivalent to torque of an ejector pin. It is interpreted that an electric motor would be functionally equivalent to a hydraulic pump.). Ohno and Kamiguchi are combinable because they are concerned with a similar technical field, namely, methods of controlling ejection sequences in injection molding processes. It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to

Art Unit: 1732

use Ohno's doctrine of equivalence in Kamiguchi's control process in order to make the control process applicable to a wider variety of molding machines.

Regarding Claim 5, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions in a single ejection step reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the "predetermined number" of malfunctions is interpreted as being able to include one (1) malfunction.). Kamiguchi shows using an electric machine, and he does not show using a hydraulic-equipped machine. Ohno shows that it is known to carry out an injection molding control sequence, wherein the functionally-similar control parameters can be applied to both electric and hydraulic machines (Column 2, lines 22-27, 33-34; Column 3, lines 38-48; It is interpreted that hydraulic pressure of an ejector pin would be functionally equivalent to torque of an ejector pin. It is interpreted that an electric motor would be functionally equivalent to a hydraulic pump). It would have been prima facie obvious to one of ordinary skill in the art at the

Art Unit: 1732

time the invention was made to use Ohno's doctrine of equivalence in Kamiguchi's control process in order to make the control process applicable to a wider variety of molding machines.

Regarding Claim 6, Kamiguchi shows that it is known to carry out a method of detecting a malfunction in an electric injection molding machine, the method being applied to the step of ejecting a molded product by pushing an ejector pin out of a die (Abstract), comprising obtaining a pattern showing torque of an ejector pin driving motor versus time (Figure 5); setting in advance at least one monitoring zone based on the pattern and the upper and lower limits of torque in each of the monitoring zones (Figure 5; Column 4, lines 45-50; Column 5, lines 51-57); and monitoring a torque value in each of the monitoring zones during the ejecting step, judging that a malfunction occurs when the torque value falls outside the upper and lower limits of the monitoring zones, and counting the number of malfunctions (Figure 5; Column 1, lines 62-65; Column 4, lines 45-50; Column 5, lines 4-10, 52-57; Column 8, lines 64-67; Column 9, lines 1-9); and raising an alarm when the number of malfunctions occurring within a predetermined time reaches a predetermined number (Column 1, lines 62-65; Column 9, lines 1-9; It is noted that the "predetermined number" of malfunctions is interpreted as being able to include one (1) malfunction. It is further noted that the "predetermined time" is interpreted as being able to include the time for a single ejection step.). Kamiguchi shows using an electric machine, and he does not show using a hydraulic-equipped machine. Ohno shows that it is known to carry out an injection molding control sequence, wherein the functionally-similar control parameters can be applied to both electric and hydraulic machines (Column 2, lines 22-27, 33-34; Column 3, lines 38-48; It is interpreted that hydraulic pressure of an ejector pin would be functionally equivalent to torque of an ejector pin. It is interpreted that an electric motor would be functionally



Art Unit: 1732

equivalent to a hydraulic pump.). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use Ohno's doctrine of equivalence in Kamiguchi's control process in order to make the control process applicable to a wider variety of molding machines.

### *Double Patenting*

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 3 and 4 of U.S. Patent No. 6,669,877. Although the conflicting claims are not identical, they are not patentably distinct from each other because the cited claims of this application are fully encompassed by the cited claims of the '877 patent. In other words, the cited claims of this application are merely broader versions of the patented

Art Unit: 1732

claims and are effectively “anticipated” by the patented claims. It is noted that the standard is “not patentably distinct” which includes obviousness and anticipation.

Claims 4-6 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 2, 5, and 6 of U.S. Patent No. 6,669,877. Although the conflicting claims are not identical, they are not patentably distinct from each other because the cited claims of this application are fully encompassed by the cited claims of the ‘877 patent. In other words, the cited claims of this application are merely broader versions of the patented claims and are effectively “anticipated” by the patented claims. It is noted that the standard is “not patentably distinct” which includes obviousness and anticipation.

Claims 1-3 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/636621 in view of Kamiguchi. The cited claims of the ‘621 application show the subject matter of the cited claims of this application, but they do not show a driving motor that pushes the end of an ejector pin via a feed screw. Kamiguchi shows that it is known to control a driving motor that is configured to push a tail end of the ejector pin via a feed screw (Column 7, lines 9-13). It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to use a feed screw to transmit movement from the motor to an ejector pin via a screw, as taught by Kamiguchi, in the claims of the ‘621 application in order to most efficiently translate movement during the molding process.

This is a provisional obviousness-type double patenting rejection.

***Response to Arguments***


Applicant's arguments, see the paper filed 21 November 2005, with respect to the rejection(s) of claim(s) 1-6 under Stirn have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kamiguchi.


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Monica A Huson  
February 6, 2006

  
**MICHAEL P. COLAIANNI**  
**SUPERVISORY PATENT EXAMINER**